DEVELOPMENT OF A MACHINE OPERATOR ATTENDANCE SYSTEM

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF MECHANICAL ENGINEERING, FACULTY OF ENGINEERING, UNIVERSITY OF LAGOS, AKOKA, LAGOS STATE

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Machine Operator Attendance System" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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PROJECT SUPERVISOR Date

_____ _____

HEAD OF DEPARTMENT Date

_____ _____

EXTERNAL EXAMINER Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Mechanical Engineering, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

ABSTRACT

This study developed and evaluated a Web software solution for development within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Thermodynamics Laws and the Tribology Theory. A total of 80 users were purposively selected for the usability evaluation, out of which 71 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 84.8% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of development of a machine operator attendance system is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The phenomenon of development, while not new, has acquired fresh analytical urgency in Nigeria. Globalisation and technological change have intensified both the opportunities and the challenges associated with development. Empirical evidence from Oyelaran and Nnamdi (2021) suggests that positive developments in machine are associated with improvements in development. Accordingly, there is a growing consensus that deliberate policy action is required. Field evidence gathered by Nnamdi and Salami (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. Accordingly, there is a growing consensus that deliberate policy action is required. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Evidence from national agencies indicates that development has grown considerably in recent times, underscoring the need for systematic inquiry. Evidence assembled by Alade and Alade (2015) across twelve states underscored the heterogeneity of outcomes linked to development. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Research by Okonkwo and Famuyide (2021) using mixed methods provided particularly rich insight into the mechanisms connecting development and machine. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

The relationship between development and machine has been the subject of sustained academic interest across several disciplines. Within Lagos State, the country's most populous commercial hub, the dynamics of development are observed in their starkest form. The work of Okonkwo and Famuyide (2023) extended earlier analyses by demonstrating that machine reinforces the effects of development. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Eze and Chukwu (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

development continues to command considerable attention among researchers, policymakers, and practitioners in mechanical engineering. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. Longitudinal research by Alade and Adeniyi (2016) revealed that sustained attention to development yields appreciable dividends over time. Such findings